HÖGSKOLAN I GÄVLE

Thesis Work in Computer Engineering 15 cr

Examensarbete för högskoleingenjörsexamen i Datavetenskap 15 hp

Set by Faculty of Engineering and Sustainable Development

Version	**Set at**	**Valid from**
	3/12/14	**VT2014**

Level	G2E
Education level	First cycle
Course identifier	DVG800
Credits	15 cr
Main field of study	Computer Science
Subject group	Computer Technology
Disciplinary domain	Technology 100.0 %

Learning outcomes

After completion of the course the student shall be able to:
1. independently base their engineering work on the scientific fundaments of computer engineering and its best practice and inform themselves about and relate to current research and development
2. apply and develop broad knowledge of computer technology and, when relevant, mathematics and science
3. identify, formulate and manage problems and issues, analyze and evaluate technical solutions, and plan and carry out the engineering work, using appropriate methods within a given scope
4. critically and systematically use information and results from models, simulations or evaluations of technical designs
5. design and manage products, processes or systems with consideration to the users and, when relevant, include economical, social and ecological sustainable development
6. in writing and orally describe, critically review and discuss information, problems and solutions in dialogue with different groups and with a scientific approach
7. with a holistic approach, make judgments taking into account relevant scientific, technical, social and ethical aspects.

Course content

This course is part of the Engineering Degree in Computer Science with specialization in

computer engineering and is intended to be the final part of the education. The purpose is to achieve the learning outcomes of the degree by completing an independent investigation, development or construction work in the IT field, and to critically discuss the results obtained. With a scientific approach, knowledge and skills developed while studying should be applied, broadened and deepened. The course includes written and oral presentation, participation in seminars, and to review and verbally oppose on others' work.

Teaching

The instruction consists of supervising and seminars in which students are expected to participate actively and well prepared. The supervisor tutors the student during the independent work and gives feedback with comments and suggestions, but will not perform the student's work.

Prerequisites

The course Scientific Theory and Writing 7.5 cr or equivalent. Approved courses of at least 120 cr including 60 cr in computer science and 30 cr in mathematics.

Examination

Examination takes place in seminars and through examination of the reported artifacts, such as the written thesis and other results of the work performed. The project work is carried out individually or in groups of no more than two students. The examination is individual, which requires that the individual's contribution must be made clear. Besides a presentation of the independent work at hand and a public discussion of somebody else's work, it is mandatory with attendance at two other public discussions. Additionally, attendence at other required seminars is mandatory.

Grade

A, B, C, D, E, Fx, F

Other regulations

To start the course it is required that the subject principal has approved the student's thesis plan. Degree Criteria for final grade will be described in a student manual, which gives a detailed description of how the different learning outcomes are examined and their connection to the course modules. The subject principal appoints a suitable supervisor and research trained examiner and co-examiner.

Sustainable environment

A minor part of the course content deals with sustainable development.

Module

0010	Seminars	2 cr	Grade: UV
0020	Engineering work	5 cr	Grade: UV
0030	Written thesis	8 cr	Grade: AF